

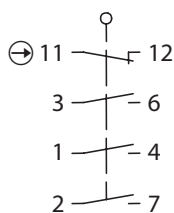
Metal bodied limit switch

Series MN78

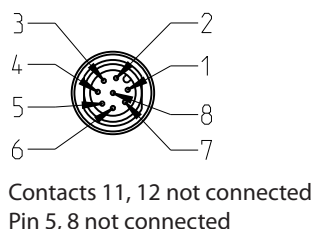
Description **MN78-13 RM 09**

Article number **6187000012**

Operating symbol



Plug connector



Operating diagram

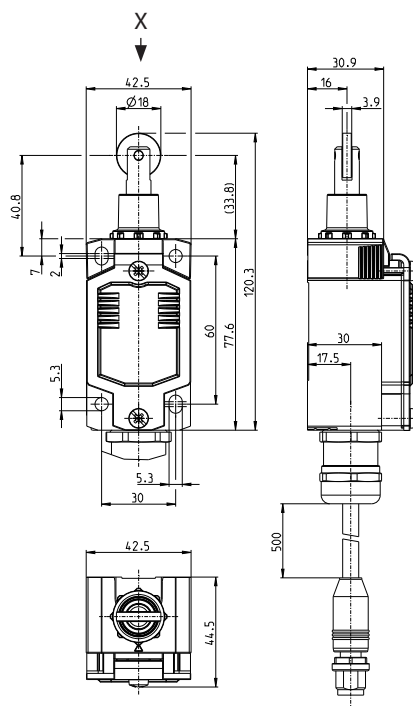
Values valid in arrow direction X

[mm]	11-12	3-6	1-4	2-7	[N]
0					1,5
1,2					9,5
2					
2,4					12
6					21

ON

OFF

Tolerance:
Operating point $\pm 0,6$ mm
Direct opening action $+ 0,6$ mm
Operating force ± 20 %



m/s	0,1	0,5	1	2	5
A	20°	20°	10°	5°	-
B	20°	20°	10°	5°	-

Electrical Data

Rated insulation voltage	U_i	36 V
Rated impulse withstand voltage	U_{imp}	0,8 kV
Rated operational voltage	U_e	30 V AC / 24 V DC
Rated supply frequency AC		50 / 60 Hz
Conv. thermal current	I_{the}	1,5 A
Minimum current		1 mA
Utilization category		AC 15, U_e/I_e 30 V / 1,5 A; DC 13, U_e/I_e 24 V / 1,5 A
Direct opening action		acc. IEC/EN 60947-5-1, annex K
Short-circuit protective device		Fuse 4 A gG
Rated conditional short-circuit current		400 A
Protection class		III (safety extra-low voltage)

Mechanical data	
Enclosure	Die-cast aluminium
Cover	Sheet aluminium
Actuator	Roller (stainless steel 1.4104)
Operating temperature	-30 °C ... +75 °C
Storage temperature	-40 °C ... +80 °C
Protection type	IP66 / IP67 acc. EN 60529, Type 4X
Pollution degree (built-in switch)	3
Contact material	silver
Contact type	1 N.C. (Form Zb), 3 N.O.
Switching frequency	≤ 60 / min.
Mechanical life	10 x 10 ⁶ operating cycles
Mission time	≤ 20 years
Connection	PUR cable, 8 x 0.25 mm ² with M12x1 plug, 8-pin, A-coded
Weight	≈ 0,24 kg
Installation position	operator definable

Actuation
The actuating device is preferably started from 2 sides. The actuation assembly can be rotated in 45° increments such that 8 actuation directions are possible.

ID for safety engineering	
B10d N.C.	20 x 10 ⁶ cycles
B10d N.O.	1 x 10 ⁶ cycles

Standards
DIN EN 60947-5-1
UL 508 / CSA C22.2 No.14
DIN EN ISO 13849-1
DIN EN ISO 13849-2

EU Conformity
acc. to directive 2011/65/EU (RoHS II)

Approvals
UL

Notes
The degree of protection (IP code) specified applies solely to a property closed cover and in fully locked position with it's plugs. The connector must not be connected or disconnected when voltage is applied.